

ABSTRACT OF THE DISCLOSURE

The object of the present invention is to provide a position detection apparatus that is able to easily detect self-position during autonomous movement by a humanoid robot that moves by the use of legs or automobile.

The present invention discloses a position detection apparatus that detects the position of a moving object, said position detection apparatus being provided with a brightness image acquisition device that acquires a brightness image of the forward field of view of the moving object, a distance image acquisition device having the same field of view as the brightness image acquisition device that acquires a distance image simultaneous to acquisition of a brightness image by the brightness image acquisition device, a characteristic point extraction device that extracts respective characteristic points from the brightness images of at least two consecutive frames, and a reference characteristic point selection device that calculates the amount of displacement of a position between two frames of a characteristic point extracted by the characteristic point extraction device based on a distance image, and selects a reference characteristic point for calculating self-position according to said amount of displacement.

TECHNICAL FIELD